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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,583	11/27/2001	Geoffrey Alan Cleary	60136.0149USU1	7292
23552	7590	11/20/2009	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			VAN HANDEL, MICHAEL P	
			ART UNIT	PAPER NUMBER
			2424	
			MAIL DATE	DELIVERY MODE
			11/20/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/994,583	CLEARY ET AL.	
	Examiner	Art Unit	
	MICHAEL VAN HANDEL	2424	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 September 2009.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-25, 27 and 28 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-25, 27, 28 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/17/2009 has been entered.

Response to Amendment

2. This action is responsive to an Amendment filed 9/17/2009. Claims **1-25, 27, 28** are pending. Claims **1-8, 11, 12, 28** are amended. Claim **26** is canceled.

Response to Arguments

3. Applicant's arguments regarding claims **1, 2, 12, and 28**, filed 9/17/2009, have been fully considered, but they are not persuasive.

Regarding claims **1, 2, 12, and 28**, the applicant argues that Ellis et al. does not mention recording programs for subsequent access by a user or subscriber. The examiner respectfully disagrees. Ellis et al. discloses that programs may be recorded and played back on-demand by remote media server 24 in response to record and playback requests (p. 5, paragraph 74).

Remote media server 24 records programs and supplies them to user television equipment 22 in response to requests generated by the program guide (p. 5, paragraph 75). Additionally, Ellis et

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al. discloses caching programs for playback by a user (p. 7, paragraphs 93-86). Ellis et al. discloses providing the user with the opportunity to access a directory or other such list of programs that have been recorded for the user on remote media server 24 (p. 13, paragraph 145). Ellis et al. still further discloses providing users with an opportunity to real-time cache programs. This allows users to view portions of a program they would otherwise not be able to view when, for example, they must momentarily leave the room in which the program is being shown. A user may indicate a desire to record a program on remote media server 24 by pressing a "PAUSE" key on remote control 40. When the user returns, remote media server 24 may play back the cached copy of the program while continuing to cache the remaining portion of the aired program until the program is over (p. 15, paragraph 165). Ellis et al. also discloses that the remote media server may automatically cache or otherwise temporarily record all current programs, programs being viewed, or programs for certain subscribers thereby providing users or subscribers with the ability to have full VCR-like control of such cached or recorded programs (p. 15, paragraph 166). As such, the examiner maintains that Ellis et al. teaches recording programs for subsequent access by a user or subscriber.

Further regarding claims **1**, **2**, **12**, and **28**, the applicant argues that Ellis et al. does not disclose, teach, or suggest how content having a variable duration is stored. The examiner respectfully disagrees. The applicant specifically argues that Ellis et al. only mentions recording programs using a start/stop time or duration and that therefore, the program may be "clipped" so that the user would actually miss the last portion of the program having a variable duration, e.g., a game going into extra innings or into overtime. As noted in the Office Action mailed 3/17/2009, Applicant's specification describes sporting events as content of variable duration (p.

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10, lines 20-21 of Applicant's specification). Ellis et al. discloses that a user may record sporting events at the remote media server (p. 3, paragraph 60; p. 10, paragraph 122; p. 13, paragraph 148; & Fig. 18a). As such, the examiner maintains that Ellis et al. teaches storing content of variable duration, as currently claimed. As further noted in the Office Action mailed 3/17/2009, Ellis et al. discloses that a user may be able to cache programs in real-time. A user may indicate a desire to record a program on remote media server 24 by pressing a "PAUSE" key on remote control 40. A record request is then issued to remote media server 24. Remote media server begins recording the program at this point and until the program is finished or until the user fast-forwards to the end of the cached copy (p. 15, paragraph 165 & p. 19, paragraph 200). The examiner notes that the duration of the content changes over time as more of the content is cached, and that the total recorded duration may depend on whether the user fast-forwards to the end or not. This also meets the limitation of storing content of variable duration, as currently claimed. Applicant further specifically argues that Ellis et al. only teaches caching the previously recorded program with respect to the dynamically storing step. The examiner notes; however, that the previously stored content is still a sports program, and as such, is still content of variable duration. Furthermore, as noted above, the duration of the cached content varies as the caching continues and also depends on whether the user uses any of the VCR-like functions to fast-forward or rewind through the cached content. As such, the examiner maintains that Ellis et al. teaches the limitation of storing content of variable duration, as currently claimed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims **1-4, 7-16, 25, 27, 28** are rejected under 35 U.S.C. 102(e) as being anticipated by Ellis et al.

Referring to claim **1**, Ellis et al. discloses a method, comprising:

- receiving audiovisual data from a desired transmission channel (the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and may direct the processing circuitry's one or more tuners to particular channels at particular times. The channels are also received at user television equipment 22 over communication link 20. The processing circuitry 11 is suitable for decoding program files stored on storage 15 and converting them to suitable video signals for distribution by distribution equipment 21)(p. 4, paragraphs 64, 65; p. 5, paragraphs 75, 77; p. 6, paragraph 88; & Figs. 2a-2d, 5)
- if said audiovisual data is not compressed according to a predetermined format, compressing said audiovisual data according to said predetermined format (p. 6, 7, paragraph 89);
- storing dynamically, in a mass storage device and for a predefined period of time, compressed audiovisual data received from said desired transmission channel to be

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included in a title plan generated by a time shift scheduler, wherein said title plan includes information identifying a plurality of content stored dynamically as compressed audiovisual data (programs and identifiers are stored in response to record requests and the users can access the programs through a guide interface. Programs are automatically deleted if they haven't been accessed for a predetermined period of time)(p. 5, paragraph 74; p. 6, paragraphs 82-84; p. 13, paragraph 145; p. 16, paragraph 169; & Figs. 18a-18f), wherein at least one of said plurality of content has a variable duration (sports programs or cached programs with VCR like features. The examiner notes that sports programs are content of variable duration, as noted in Applicant's specification. The examiner further interprets cached programs with VCR like commands to be content of variable duration, because the duration of this stored content varies until the program is over or the user fast-forwards to the end of the cached copy)(p. 3, paragraph 60; p. 7, paragraphs 94-96; p. 10, paragraph 122; & p. 15, paragraphs 162, 163), wherein storing compressed audiovisual data dynamically comprises:

- allocating a portion of memory in the mass storage device for recording a portion of the at least one of said plurality of content having the variable duration for subsequent access by users (15 minutes worth of memory)(p. 7, paragraph 96);
- utilizing a predetermined amount of said allocated portion of memory to record a portion of the at least one of said plurality of content having a

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- variable duration (as a user advances towards minute 15, the next 15 minutes are retrieved and cached)(p. 7, paragraph 96);
- allocating an additional portion of memory in the mass storage device to record a next portion of the at least one of said plurality of content having the variable duration in response to utilizing said predetermined amount of said allocated portion of memory (as a user advances towards minute 15, the next 15 minutes are retrieved and cached)(p. 7, paragraph 96); and
 - repeating said utilizing and said allocating said additional portion of memory until all of said at least one of said plurality of content having a variable duration is stored (the next 15 minutes of data is continually prefetched (p. 7, paragraph 96; p. 15, paragraph 165; & p. 19, paragraph 200)); and
 - deallocating any allocated portion of memory not used to record the at least one of said plurality of content having a variable duration (deletion of a program that is not a sports program or cached program)(p. 16, paragraph 169); and
- in response to a user request, providing to said user stored compressed audiovisual data beginning with a portion of said stored compressed audiovisual data having associated with it a first temporal parameter (p. 15, paragraphs 163-166 & Fig. 22).

Referring to claim 2, Ellis et al. discloses a method in a system adapted to receive broadcast content on a desired transmission channel from each of a plurality of content sources and forward said received broadcast content to a transport network for distribution to subscribers (the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and

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may direct the processing circuitry's one or more tuners to particular channels at particular times. The channels are also received at user television equipment 22 over communication link 20. The processing circuitry 11 is suitable for decoding program files stored on storage 15 and converting them to suitable video signals for distribution by distribution equipment 21)(p. 4, paragraphs 64, 65; p. 5, paragraphs 75, 77; p. 6, paragraph 88; & Figs. 2a-2d, 5), the method comprising:

- in response to a title plan generated by a time shift scheduler, wherein said title plan includes information identifying a plurality of content (programs and identifiers are stored in response to record requests and the users can access the programs through a guide interface)(p. 5, paragraph 74; p. 6, paragraphs 82-84; p. 13, paragraph 145; & Figs. 18a-18f), wherein at least one of said plurality of content has a variable duration (sports programs or cached programs with VCR like features. The examiner notes that sports programs are content of variable duration, as noted in Applicant's specification. The examiner further interprets cached programs with VCR commands to be content of variable duration, because the duration of this stored content varies until the program is over or the user fast-forwards to the end of the cached copy)(p. 3, paragraph 60; p. 7, paragraphs 94-96; p. 10, paragraph 122; & p. 15, paragraphs 162, 163), storing dynamically the plurality of content in a server and associating with the plurality of content a temporal parameter (p. 15, paragraphs 163-166 & Fig. 22), wherein storing dynamically comprises:
 - o allocating a portion of memory in a mass storage device for recording a portion of the at least one of said plurality of content having a variable

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- duration for subsequent access (15 minutes worth of memory)(p. 7, paragraph 96);
- utilizing a predetermined amount of said allocated portion of memory to record a portion of the at least one plurality of content having a variable duration (as a user advances towards minute 15, the next 15 minutes are retrieved and cached)(p. 7, paragraph 96);
 - allocating an additional portion of memory in the mass storage device to record a next portion of the at least one plurality of content having a variable duration in response to utilizing said predetermined amount of said allocated portion of memory (as a user advances towards minute 15, the next 15 minutes are retrieved and cached)(p. 7, paragraph 96);
 - repeating said utilizing and said allocating said additional portion of memory until all of said at least one of said plurality of content having a variable duration is stored (the next 15 minutes of data is continually prefetched)(p. 7, paragraph 96; p. 15, paragraph 165; & p. 19, paragraph 200); and
 - dellocating any allocated portion of memory not used to record the at least one plurality of content having a variable duration (deletion of a program that is not a sports program or cached program)(p. 16, paragraph 169); and
- forwarding the plurality of content to said transport network for distribution in accordance with said temporal parameter to a requesting subscriber (p. 15, paragraphs 163-166 & Fig. 22); and

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- in response to a subscriber request for temporally shifted content associated with the plurality of content, forwarding the stored plurality of content to said transport network for distribution to said requesting subscriber (p. 15, paragraphs 163-166 & Fig. 22).

Referring to claim **3**, Ellis et al. discloses the method of claim 2, further comprising forwarding to said transport network only the received plurality of content presently requested by any subscriber (p. 7, paragraph 91).

Referring to claim **4**, Ellis et al. discloses the method of claim 2, further comprising storing, in said server, the plurality of content presently requested by a threshold number of subscribers (p. 6, paragraphs 85, 86).

Referring to claim **7**, Ellis et al. discloses the method of claim 2, wherein said storing of said desired plurality of content comprises storing a version of the desired plurality of content to generate a play track (p. 5, paragraph 74 & p. 7, paragraph 91).

Referring to claim **8**, Ellis et al. discloses the method of claim 2, further comprising, storing selected plurality of content during a predetermined time interval of a broadcast schedule (p. 5, paragraph 76).

Referring to claim **9**, Ellis et al. discloses the method of claim 2, wherein said subscriber request for temporally shifted content is initiated by receiving a subscriber title selection from a time shift interactive programming guide screen (p. 15, paragraphs 162, 163 & Fig. 22).

Referring to claim **10**, Ellis et al. discloses the method of claim 2, wherein said subscriber request for temporally shifted content is initiated by receiving a subscriber title selection from a time shift navigation screen (p. 15, paragraphs 162, 163 & Fig. 22).

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Referring to claim **11**, Ellis et al. discloses the method of claim 2, wherein said subscriber request for temporally shifted content is initiated by receiving a pause or rewind subscriber selection while broadcasting of said desired plurality of content (p. 17, 18, paragraph 185).

Referring to claims **12** and **28**, Ellis et al. discloses a method/system for providing video information in an interactive information distribution system to a plurality of subscribers, comprising:

- receiving a plurality of scheduled broadcast programs on a desired transmission channel in real-time (the recorder 125 is a process running on processing circuitry 11 of remote media server 24 and may direct the processing circuitry's one or more tuners to particular channels at particular times. The channels are also received at user television equipment 22 over communication link 20. The processing circuitry 11 is suitable for decoding program files stored on storage 15 and converting them to suitable video signals for distribution by distribution equipment 21)(p. 4, paragraphs 64, 65; p. 5, paragraphs 75, 77; p. 6, paragraph 88; & Figs. 2a-2d, 5);
- selecting a portion of said broadcast programs according to a title plan generated by a time shift scheduler, wherein said title plan includes information identifying a plurality of content (programs and identifiers are stored in response to record requests and the users can access the programs through a guide interface)(p. 5, paragraph 74; p. 6, paragraphs 82-84; p. 13, paragraph 145; & Figs. 18a-18f), wherein at least one of said plurality of content has a variable duration (sports programs or cached programs with VCR like features. The examiner notes that sports programs are content of variable duration, as noted in Applicant's specification. The examiner

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- further interprets cached programs with VCR like commands to be content of variable duration, because the duration of this stored content varies until the program is over or the user fast-forwards to the end of the cached copy)(p. 3, paragraph 60; p. 7, paragraphs 94-96; p. 10, paragraph 122; & p. 15, paragraphs 162, 163);
- processing said selected broadcast programs into temporally adjusted content, such that the temporally adjusted content is associated with said selected broadcast programs (the examiner notes that by recording content, it can be viewed at a different time than when it was aired. The examiner interprets such content to be temporally adjusted. Ellis et al. further discloses that the user can fast-forward or rewind the content)(p. 15, paragraphs 162, 163, 166);
 - storing dynamically said temporally adjusted content of at least one program having a variable duration for later access by subscribers (p. 5, paragraph 74; p. 6, paragraphs 82-84; p. 13, paragraph 145; p. 16, paragraph 169; & Figs. 18a-18f), wherein storing dynamically said temporally adjusted content of the at least one program having a variable duration for later access by subscribers comprises:
 - o allocating a portion of memory in a mass storage device for recording a portion of the temporally adjusted content of the at least one program having a variable duration (15 minutes worth of memory)(p. 7, paragraph 96);
 - o utilizing a predetermined amount of said allocated portion of memory to record a portion of the temporally adjusted content of the at least one program having a variable duration as a user advances towards minute 15, the next 15 minutes are retrieved and cached)(p. 7, paragraph 96);

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- allocating an additional portion of memory in the mass storage device to record a next portion of the temporally adjusted content of the at least one program having a variable duration in response to utilizing said predetermined amount of said allocated portion of memory (as a user advances towards minute 15, the next 15 minutes are retrieved and cached)(p. 7, paragraph 96);
- repeating said utilizing and said allocating said additional portion of memory until all of the temporally adjusted content of the at least one program having a variable duration is stored (the next 15 minutes of data is continually prefetched)(p. 7, paragraph 96; p. 15, paragraph 165; & p. 19, paragraph 200); and
- deallocating any allocated portion of memory not used to record the temporally adjusted content of the at least one program having a variable duration (deletion of a program that is not a sports program or cached program)(p. 16, paragraph 169); and
- broadcasting said plurality of scheduled broadcast programs to said plurality of subscribers via said desired transmission channel (p. 4, paragraph & p. 7, paragraphs 94-96)
- in a first mode of operation, associating a temporal parameter to said temporally adjusted content of the at least one program having a variable duration and streaming, on-demand, said temporally adjusted content of the at least one program having the variable duration and said temporal parameter to those subscribers viewing said selected broadcast programs currently being broadcast, such that said subscribers may

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interactively activate such temporally adjusted content of the at least one program having a variable duration contemporaneously with said currently broadcast programs (p. 15, paragraphs 163-66).

Referring to claim **13**, Ellis et al. discloses the method of claim 12, further comprising providing a navigator list (directory) to said subscribers having screens presenting said selected broadcast programs having temporally adjusted content for viewing and selection, wherein in an alternate mode of operation, streaming, on-demand, said temporally adjusted content via said navigator list, such that said subscribers may interactively activate such temporally adjusted content during viewership of previously scheduled broadcast programs selected from said navigator list (p. 13, paragraph 145 & Fig. 18a).

Referring to claim **14**, Ellis et al. discloses the method of claim 13, wherein said subscribers may interactively switch between said first mode and said alternate mode of operation (the examiner notes that the remote media server 24 can perform real-time caching of a program, allowing a user to continue watching later. The user can then catch up to the aired program by fast-forwarding. The user could also switch to a different stored program through the directory listing)(p. 13, paragraph 145; p. 15, paragraphs 165, 166; & Fig. 18a).

Referring to claim **15**, Ellis et al. discloses the method of claim 12, wherein said selecting step comprises:

- monitoring subscriber viewership and selecting those broadcast programs having a viewership exceeding a predetermined metric (p. 6, paragraphs 85, 86 & p. 13, paragraph 148).

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Referring to claim **16**, Ellis et al. discloses the method of claim 12, wherein said selecting step further comprises:

- generating title plans for identifying said broadcast programs to be temporally adjusted (p. 15, paragraph 166); and
- defining a temporal availability window for each program (the examiner notes that the remote media server 24 records the program from the position at which the user began recording up to the position of the aired program (p. 15, paragraph 165, 166).

Referring to claim **25**, Ellis et al. discloses the method of claim 12, wherein said first mode of operation further comprises providing an interactive program guide (IPG) to said subscribers having screens presenting said broadcast programs having temporally adjusted content for viewing and selection (p. 13, paragraphs 145-148; & Fig. 18a-f.

Referring to claim **27**, Ellis et al. discloses the method of claim 12, wherein said first mode of operation comprises receiving a temporal control message from a subscriber selected from the group of temporal control messages consisting of pause, rewind, and fast-forward (p. 9, paragraph 111 & p. 15, paragraphs 163, 164).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims **5, 6, 17-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. in view of Moeller et al.

Referring to claims **5** and **6**, Ellis et al. discloses the method of claim 2. Ellis et al. further discloses allowing a user to pause, stop, rewind, fast-forward, or play a program at a remote media server (p. 15, paragraph 162). Ellis et al. does not specifically disclose that the step of storing comprises storing a temporally sub-sampled version of the desired plurality of content to generate a fast-forward track. Moeller et al. discloses a system that is capable of transferring or playing a normal play stream at any of various indicated positions or locations (col. 6, l. 45-49). The media server stores fast forward and fast reverse streams in association with normal play streams (col. 4, l. 61-65). The fast forward and fast reverse streams have different presentation rates than the normal play stream and are generated from the normal play stream (col. 6, l. 51-59). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the step of storing in Ellis et al. to include storing fast forward and fast reverse streams in association with a normal play stream, such as that taught by Moeller et al. in order to decrease latency time at a video server.

Referring to claim **17**, Ellis et al. discloses the method of claim 16. Ellis et al. does not disclose that the processing step comprises generating real-time encoded play tracks, fast-forward tracks, rewind tracks, and entry point data (EPD) files associated with each track, said fast-forward and rewind tracks forming said temporally adjusted content. Moeller et al. discloses generating fast forward and fast reverse video streams from a normal play stream (col. 6, l. 55-59) and embedding indexing information within the streams to provide for indexing between the streams (col. 9, l. 10-14 & col. 11, l. 39-41). It would have been obvious to one of ordinary skill

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in the art at the time that the invention was made to modify the processing step of Ellis et al. to include generating fast forward and fast reverse video streams from a normal play stream and embedding indexing information within the streams to provide for indexing between the streams, such as that taught by Moeller et al. in order to efficiently index to different positions in a video stream in a video delivery system (col. 4, l. 20-23).

Referring to claim **18**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 17. Ellis et al. further discloses encoding the broadcast programs identified in the title plan (p. 6, 7, paragraph 89) and buffering said encoded broadcast programs (p. 6, 7, paragraph 89). Ellis et al. does not disclose that the processing step comprises encoding said broadcast programs to form said temporally adjusted programs. Moeller et al. discloses generating compressed fast forward and fast reverse video streams from a normal play stream (col. 6, l. 55-59). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the processing step of Ellis et al. to include generating compressed fast forward and fast reverse video streams from a normal play stream, such as that taught by Moeller et al. in order to decrease latency time at a video server.

Referring to claim **19**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 18. Ellis et al. does not disclose that the processing step further comprises:

- receiving packetized transport streams from at least one encoder; and
- inserting title identification codes (TICs) to each packet to enable said transport streams to be identified as said real-time encoded play tracks, fast-forward tracks, and rewind tracks.

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Moeller et al. discloses generating compressed fast forward and fast reverse video streams from a normal play stream (col. 6, l. 56-59). Moeller et al. further discloses that the encoded stream includes sequence headers that include presentation timestamps and information describing the frame rate and picture size (col. 9, l. 57-62). Moeller et al. further discloses embedding indexing information within the normal play stream and associated trick play streams to provide for indexing between the streams (col. 9, l. 10-14). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the processing step of Ellis et al. to include embedding timestamps, frame rate information, and indexing information within play streams and trick play streams, such as that taught by Moeller et al. in order to decrease latency time at a video server.

Referring to claims **20** and **21**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 19. Ellis et al. does not disclose generating EPD files as fast-forward and rewind tracks are being created. Moeller et al. discloses generating and embedding index information within normal play streams and associated trick play streams to provide for indexing between the streams (col. 9, l. 10-14). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Ellis et al. to include generating and embedding index information within normal play streams and associated trick play streams, such as that taught by Moeller et al. in order to decrease latency time at a video server.

8. Claims **22-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. in view of Moeller et al. and further in view of Youden et al.

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Referring to claim **22**, the combination of Ellis et al. and Moeller et al. teaches the method of claim 19, wherein the storing step includes receiving the buffered encoded broadcast programs (p. 6, 7, paragraphs 89, 90) and storing the real-time play tracks in a plurality of extents (p. 6, paragraphs 82, 83). Neither Ellis et al. nor Moeller et al. disclose that the storing step comprises storing said fast-forward tracks in extents in front to back order and storing said rewind tracks in extents in back to front order. Youden et al. discloses storing selected video data for a FF version in the same order as the original video data is stored and storing the selected video data for the FR version in reverse order to the original version of the video data (col. 4, l. 3-7). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the storing step in the combination of Ellis et al. and Moeller et al. to include storing video data for a FF version in the same order as the original video data is stored and storing the selected video data for the FR version in reverse order to the original version of the video data, such as that taught by Youden et al. in order to decrease latency time at a video server.

Referring to claim **23**, the combination of Ellis et al., Moeller et al., and Youden et al. teaches the method of claim 22, where said storing step further comprises storing selected broadcast programs from a particular channel for a fixed window of time (Ellis et al. p. 6, paragraph 87).

Referring to claim **24**, the combination of Ellis et al., Moeller et al., and Youden et al. teaches the method of claim 22, where said storing step further comprises storing selected broadcast programs from a plurality of channels (Ellis et al. p. 6, paragraph 88).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL VAN HANDEL whose telephone number is (571)272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Michael Van Handel/
Examiner, Art Unit 2424

11/19/2009